JANUARY 1956

FIREMEN

SIXTIETH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

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ALARM +20

(See page 7)

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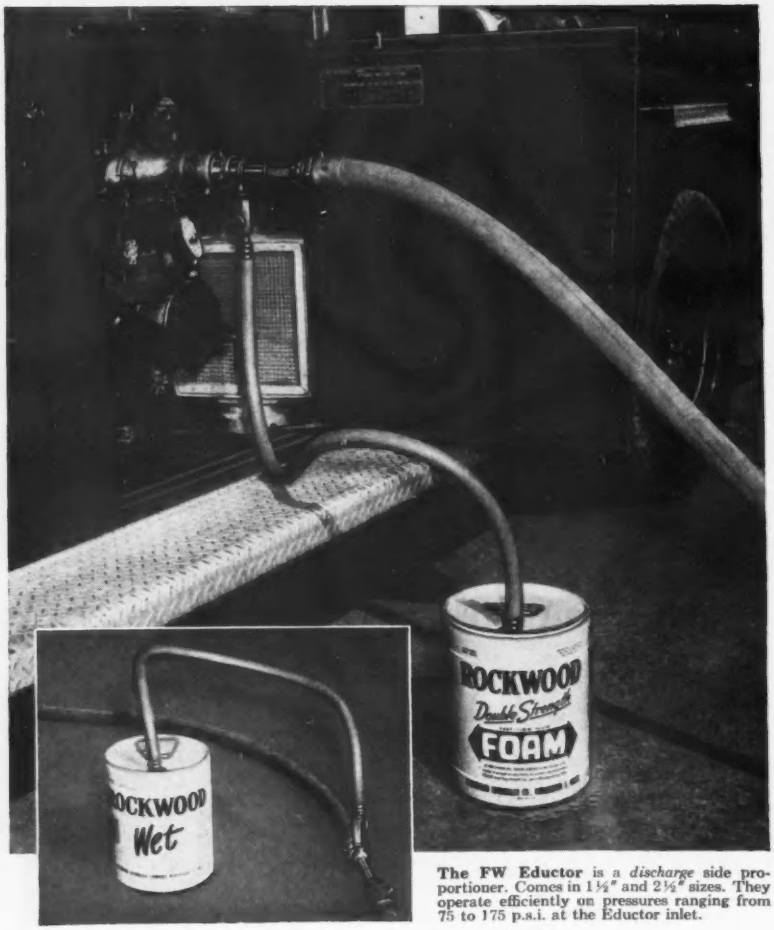

The FW Eductor is a *discharge* side proportioner. Comes in 1½" and 2½" sizes. They operate efficiently on pressures ranging from 75 to 175 p.s.i. at the Eductor inlet.

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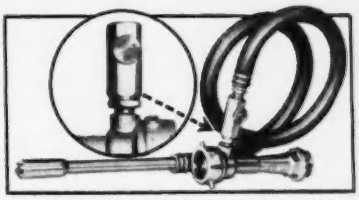

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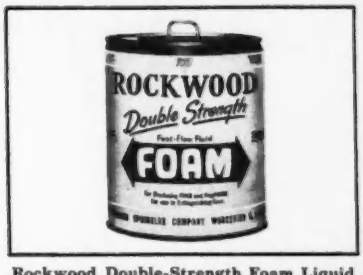

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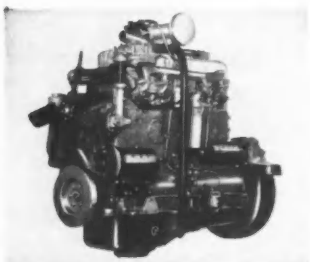

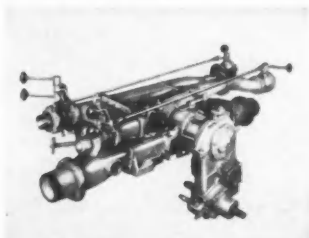

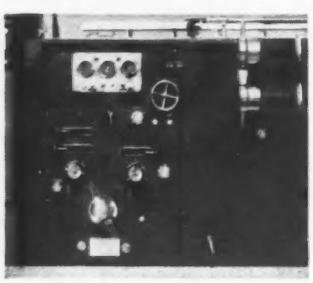

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Firemen

Volume 23 — Number 1

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Alarm plus 20

Within approximately twenty minutes after the first alarm was sounded a South Boston, Massachusetts, tenement building was involved to the extent shown on this month's cover. The fire occurred on December 12 just before 8:30 A.M., with temperature in the low twenties and a gusty wind force of about 25 mph. As the cover picture and the pictures on page 13 show, the wind direction, wood frame construction, and vertical openings in the interior created nearly perfect draft conditions and quick, full involvement resulted.

The fire demanded 5-alarm response by the Boston Fire Department. While one child lost his life in the building, first responding fire fighters prevented a greater death toll by courageous and highly efficient rescue work. One fire fighter was reported to have carried two children down a ladder in one trip. When rescue operations were completed the principal fire fighting problem was the protection of exposures in the congested district. (Cover photo by Raymond T. Lonergan, Jr., Boston Fire Department. See page 13 for more details.)

A Boston Issue

Generally, the editors of FIREMEN magazine depreciate news stories of Massachusetts fire departments to provide coverage of many U. S. and Canadian regions.

This month, however, activities around NFPA headquarters in Boston seemed to merit special editorial coverage. We hope that readers will overlook the "local" slant and will appreciate that each of the subjects on pages 11, 13, 15 and 18 deserve attention from all types of fire fighters throughout North America.

First Duty Saving Life

It seems hard to believe that any fire fighter would forget, even in the excitement of a fire, that the first objective and duty of his department is the saving of life. This has been an accepted creed of the fire service for generations.

Accordingly it was quite shocking to some fire fighters to read recent headlines: "Five Die in Fire, Firemen Believe the Building Vacant." The report went on to tell that a man and four small grandchildren died of suffocation from smoke in a first floor fire which broke out in mid-morning. It stated that the firemen had fought the fire for twenty minutes before neighbors informed them that there was a family inside. The five unconscious persons were then carried out; attempts were made to revive them with resuscitators, but this action was too late.

Interestingly, on the same page of the paper was the report of another quite similar fire in a different community in the same state. In this second fire, five children were overcome by smoke on the upper floors in an apartment fire. Fire fighters, following the standard procedure, promptly searched the entire building and found the children overcome in closets and under beds where they had sought refuge. They were removed to safety and were revived with inhalators.

It hardly seems to need repeating that the immediate duty of the first responding fire fighters is to make sure that all possible occupants of a building have escaped. Because a building is assumed to be empty, or because the fire occurs at mid-morning or some other time when tenants are not likely to be home, does not justify an assumption that there is no life hazard. The safe thing for fire fighters is to assume that there is a life hazard.

In many cities the most common reason for sounding multiple alarms is to be sure to have enough help on hand when there may be some life hazard involving extra rescue efforts. It seems incredible that a fire department could fight fire for twenty minutes on the first floor, and never get above the fire (which is a cardinal rule of good fire fighting) to ventilate the building and to check the property against the extension of fire and for life safety. That such an occurrence has taken place recently should remind all fire fighters to remember that their first task is saving life, followed by the saving of property.

THOROUGHNESS

the essence of pre-fire planning

From Chief John C. Klinck

down through the fire fighting ranks, the Memphis, Tennessee, Fire Department is making a complete pre-fire planning survey of the important industrial sites in the Department's area of protection. This first article describes the operational planning and some of the other details of this comprehensive program, according to a report submitted by Drillmaster C. L. Scott. (*Memphis Fire Dept. photos.*)

Part I

ONE of the basic purposes of pre-fire planning is to be prepared for the unexpected. Large industrial installations in particular can bring about some severe fire fighting problems for the fire department which is not adequately prepared to coordinate the skill of its members and the extinguishing capacity of modern equipment in combating the large scale fire. An excellent example of the preparation which fire departments can make for such emergencies lies in the pre-fire planning program of the Memphis, Tennessee, Fire Department headed by Chief John C. Klinck.

Many readers of FIREMEN are already familiar with the variety of activities conducted by this department. Its extensive fire prevention programs were reported in the September 1952, October 1954, and September 1955, issues of FIREMEN magazine. The May 1955 issue described the use of mobile command centers and fireground operations of the department.

A comprehensive pre-fire planning program was started some 18 months ago by the Memphis Fire Department. At that time a file was prepared which covered large industrial plants, mercantile establishments and institutions in the area. Plans and maps of the various buildings were drawn and included detailed information on fire protection facilities, construction, contents, operations and hazards of each occupancy. The principal responsibility was given to a "pre-planning committee" consisting of a deputy chief and four district chiefs. Members of this group select the locations for which pre-planning is to be made, and after all the necessary information and testing is completed, they formulate the actual fire fighting plans, subject to the approval of Chief Klinck. As changes or additional information on particular occupancies are obtained, the original description of the property is altered accordingly.

Industry officials meet with Memphis Chief John C. Klinck (second from right) to discuss fire protection improvement in various plant properties. (*Memphis Fire Dept. Photo.*)

Also included in the pre-planning program was the creation of a water-main map book which showed the water distribution system of the entire city of Memphis. The maps were reproduced in various colors, each color signifying a different size of water main. Fire hydrants and sectional cut-off valves of the system also are indicated. Another volume which is kept up-to-date describes the gas cut-off valves for most of the large buildings and plants in Memphis and the entire high value district.

The fire department is also conducting a series of water flow tests at various industrial sites and in areas of the city which are considered hazardous. These tests are made with pumpers of 1,000 gpm capacity or larger, and with heavy stream appliances. Records are kept of the water flow, pressure, pressure drop, range of hose streams, accessibility of water supply to apparatus, and the ability of pumpers to supply the necessary volumes and pressures required for specific areas.

When sufficient information is available for a particular industrial site, Chief Klinck and other officers of the department have a conference with the plant management personnel. Fire department recommendations for improved fire protection at certain occupancies are made or the department requests changes to be made in existing installations to allow improved fire protection. Industry owners and management personnel have been cooperating with the Memphis Fire Department in this respect.

When the "pre-planning committee" began its activities, the Training Division also started an extensive program to train all fire fighting personnel in the

(Continued on page 10)

Basic Considerations of Pre-fire Planning in Memphis

1. *The five basic divisions of fire fighting tactics are always considered. (Rescue, exposures, confinement, extinguishment and overhaul. See "Fire Fighting Tactics" by Lloyd Layman, available from NFPA at $3.75 per copy or as part of the 4-volume "Fireground Library" priced at $9.75 — Ed.)*

2. *The location, occupancy and construction of the property.*
   (a) Location in relation to streets, alleys, access routes, railroads, rivers, creeks, ditches and other topographical features that affect fire fighting operations.
      1. Which can be used under normal conditions?
      2. Which can be used on week ends and holidays?
      3. Which can be used anytime under emergency conditions?
      4. Which are likely to be blocked if an explosion or building collapse occurs, before the fire department arrives on the scene?
      5. What alternate access routes will be open under these conditions and at what times are they open?
   (b) Who occupies the property, what is it used for, what materials are found on the property and how many people occupy the premises?
      1. Name of occupant or occupants.
      2. Description of manufacturing or other processes carried on within the property.
      3. List all hazardous materials, amount of each and location of storage of each.
      4. Number of employees (or occupants) weekdays, week ends, nights and where they are found.
   (c) Construction of the property.
      1. Type of construction of each building.
      2. Size of each and fire protection features.
      3. Exposure of buildings to each other.
      4. Protection given to hazardous areas or processes.

3. *Public Water Supply available.*
   (a) Size of mains in the area, size of feeder mains.
   (b) Location of all city hydrants, distance of each from the property in question.
   (c) The water flow at each hydrant under fire conditions.
   (d) Designation of certain hydrants to supply large volume appliances (heavy stream equipment).

4. *Private Water Supply available.*
   (a) Private wells, reservoirs, gravity tanks, etc.
   (b) Private fire pumps, their power supply and reliability under severe fire conditions.
   (c) Size, location and cross connection of private water mains.
   (d) Location of private hydrants, their accessibility for fire department pumpers.
   (e) Location and accessibility of sectional control valves.
   (f) The relationship between the water supply for private fire hydrants and sprinkler systems.
   (g) Location of fire department pump-in connections (siamese connections) and distance of each to public hydrants.
   (h) Connection of city water supply to private mains.

5. *Heavy Stream Equipment.*
   (a) An analysis of the public and private water supplies available for supplying heavy fog and straight streams.
   (b) The distance and location of water supplies for such purposes.
   (c) The number and size of pumpers necessary to supply such appliances at various locations on the property, both for confining the fire and protecting exposures.
   (d) The maximum number of these appliances which can be operated with the available water supply and hydrants available.
   (e) The location, distance, availability and capacity of secondary water supplies in the area; number and size of pumpers and hose needed to relay this water to the fire area.

6. *Types and probable number of heavy stream and special appliances needed to confine and extinguish the fire and protect the exposures.*
   (a) Includes deck guns, ladder pipes, water tower, stream masters and fog nozzles with a capacity of over 500 gpm.
   (b) Location of such appliances to get the best possible use of each.
   (c) Plant layout or property layout in relation to placing of equipment and apparatus.

7. *Probabilities and possibilities of fire, explosion or other emergency occurring on the property.*
   (a) Location of hazardous processing areas in industrial plants.
   (b) Location of hazardous materials storage areas.
   (c) Location of areas in which fires or explosions are most likely to occur.
   (d) What effect would emergencies have on fire department response, equipment needed, accessibility to the emergency area and possible delay in fire fighting, due to rescue operations or blocked access.
   (e) Safety conditions for plant employees and fire department personnel under emergency conditions.
      1. Possibility of major or secondary explosions.
      2. Release of poisonous or other gases (which would require the use of self-contained breathing apparatus for all personnel in the area).
   (f) Responsibility for taking safety measures under emergency conditions within the property.
      1. Cutting off electric power.
      2. Cutting off gas and steam lines.
      3. Shutting down processing equipment.
      4. Starting fire pumps or operating other fire protection devices.
      5 Evacuation of affected areas.

The Two Principal Operational Plans of Memphis Fire Department

"Plan 1" is the group designations for all plans made on property which have the following qualifications:

(a) Largely unlimited accessibility from public streets and roadways.

(b) Strong public water supply in the immediate fire area and a nearby reliable secondary water supply, of ample volume, for major fire operations.

(c) Property must be such so that the first alarm companies could immediately begin protecting exposures, confinement and extinguishing operations.

(d) An area in which heavy stream equipment (deck guns, ladder pipes, stream masters and water tower) could be put to work without danger of depletion of primary water supplies and without the use of excessively long hose lines.

(e) An area in which access by the fire department (apparatus) is no particular problem.

(f) An area which is not excessively large or contains materials or processes which make unnecessary more complex fire fighting tactics.

"Plan 2" is made on all property which falls under any of the following categories:

(a) Limited public water supply in the immediate area, in relationship to the probable type or intensity of fire likely to be encountered.

(b) Limited private water supply or a relatively unreliable water supply for large capacity fire department pumpers.

1. For pumpers with a capacity up to 2,000 gpm.
2. Areas in which small size water mains supply both sprinklers and fire hydrants.

(c) Large fire areas in which the fire department would have to rely on its own equipment and manpower entirely to confine the fire and protect exposures.

1. This would include areas such as lumber yards, cotton warehouses, congested industrial groups, oil storage areas, chemical plants, cotton oil plants and congested sub-standard dwelling areas, closely built up, with narrow streets and no exposure protection.

(d) Limited accessibility to the property under normal conditions and probable extremely limited accessibility under fire or other emergency conditions.

(e) Properties in which heavy stream appliances would be needed to protect exposures and confine a fire; and where only limited water supplies of all types exist.

(f) Properties which because of special hazards would require multiple alarm companies to take special positions to effect rescue operations, protect exposures and confine the fire.

(*Continued from page 8*)

use of heavy stream appliances. In addition, every member of the department is taught the essential facts of pre-planning and is participating in training sessions on building construction, hazardous materials, operation of heavy fog stream equipment, and fire fighting tactics. Members of the department have also built scale models of some of the larger installations of industrial plants.

On the opposite page are detailed the basic considerations which are given to pre-fire planning in the Department. Note that considerable stress is placed upon the placement and supply of heavy stream equipment in fire attack and protection of exposures. Of prime importance also is the location of hydrants and their capacities to supply the fire apparatus operating in the vicinity.

The two principal operational plans of the Department are shown above. Basically these distinguish industrial properties as those which would be relatively "easy" to handle if involved by fire, and those which would require more complex fireground operations.

As reported in the May issue of FIREMEN magazine, master copies of the pre-planning information are kept in the Operational Control Unit which responds to all multiple alarm fires, establishes communications between the fireground and the fire alarm office, and carries out other pre-determined assignments.

(*Part II of this article will appear in the February issue of* FIREMEN — *Ed.*)

INDUSTRIAL - BUILDING SURVEY REPORT - INDUSTRIAL

PLANT: xxx BLD'G NO. 4 NAME: Seed Cleaning Room

AREA: 56 by 84 HEIGHT: 55 NO. FLOORS 1 TYPE: open

CONSTRUCTION OF WALLS: metal clad and wood sheathing on wood frame

CONSTRUCTION OF FLOORS: wood and concrete

CONSTRUCTION OF ROOF: composition on wood deck, wood supports

CONSTRUCTION OF FRAME: wood throughout

TYPE STAIRWAYS: open SHAFTS:

BUILDING SPRINKLERED: partially * INSIDE: 1-1½ * OUTSIDE: none STYPE

TYPE MANUFACTURING CARRIED ON: unloading of seed, elevating to seed storage, sacking and storage of seed cake

HAZARDOUS MATERIALS: seed is dusty, contains lint and oil

HAZARDOUS PROCESSING: handling of seed involves considerable dust. Building is very dusty.

SEE REMARKS ON BACK FOR DETAILS

* Building is sprinklered except for seed tunnels and machinery spaces.

Building is in poor repair, open and high. There are no fire stops, draft curtains, or fire resistive sub-divisions.

All machinery and equipment are very dusty.

Sprinklers are located just under roof and probably would be interfered with by machinery, overhead shafts and belting.

Building is hazardous because of overhead equipment, poor state of repair.

(Right) Two sides of a typical building survey report of industrial property, as prepared by Memphis inspectors.

The "Heart Law"

AN EDITORIAL in a Boston newspaper bemoans the fact that the Massachusetts Supreme Court decided that the fire fighters' (and policemen's) "Heart Law" applied to deaths of fire fighters, as well as to disability, and thereby would result in an added $80,000 pension cost to the widows of fire fighters and police officers.

The newspaper reasoned that because "exercise appears to reduce the cholesterol level of the blood and thus diminishes the possibility of a coronary block," then the effort or stress of fire fighters or policemen probably plays a "slight" role in causing heart disease. Apparently the editorial writer has never heard of hypertension and obviously knows little or nothing first-hand of the fire fighter's life and duty.

It might be well to invite such a man to spend 24 or 48 hours on duty with a typical fire department. Perhaps then he might have some slight appreciation of the terrific tension under which the fire fighter works. It is not alone brought about by the split-second precision of reacting to the "tapper." The fire fighter's job is full of uncertainties. There is the tense waiting for varied, sure-to-come emergencies in which, if he judges wrong, lives may be lost. As this is written, a "routine" call is coming over the radio, demanding fire department response for escaping chemicals or flammable liquids in a highly hazardous waterfront area. Potential death and danger to the community probably will be averted by a "routine operation" of the fire fighters.

Every fire fighter knows however that no alarm may be classed as routine if the potential danger is considered. The "breaks" can always go against the fire fighter, as for example, if an alarm is received from a school or theater at the time when companies are out on false alarms in the same district.

Even if the writer of the "Heart Law" editorial were to spend time with the fire fighter, he could not experience the full stress of the job because he would not carry the responsibility for the lives and safety of the citizens. To the fire fighter a tragic fire involving loss of life and property is not another "story." It is human suffering and loss of the communities' real property and wealth.

The fire fighter has pledged his life to the safety of other peoples' lives and property. He does not lay this burden down even when nominally off duty. The fire fighter is a participant in such suffering at first hand. He is the first representative of the community and of the public to succor those in need of assistance. While the reporter stands by to write his story, the fire fighter is under the emotional stress of making sure that everyone is out of the building. He works under the ever-present possibility of sudden death due to explosion, collapse, or flame and heat. Perhaps if such men could have the newspaperman's detached "this is just another story" philosophy, the cases of hypertension among fire fighters would be fewer.

But the fire fighter is a member of a dedicated profession the same as the family doctor or teacher or clergyman. The Legislature, speaking for the people, recognized this in passing the "Heart Law." Those of us who have known widows and children of fire fighters who have spent agonizing months without income while courts decided whether their husbands died in the line of duty due to a heart seizure, think that it is a good and just law. It expresses a "thank you" for the public for the fire fighters' continuing and life-long devotion not to his community only, but to the transients sleeping in the hotel guest room, to the passer-by caught in a motor vehicle accident, or to persons trapped in the wreck of a railroad train going through the community.

What if a few of the heart attacks are caused from stress from "outside work" as the editorial in the Boston paper suggests? Is it not a precept of law that the assumption should be in favor of the men who have put their lives on the line for their communities? Apparently the Massachusetts Supreme Court believes this is so, and the editors of FIREMEN believe that this "Heart Law" should not be repealed as the newspaper demands but that similar laws should be in effect in every State and Province.

Fire Prevention in Germany

Renowned Heidelberg University in Germany was the scene of some colorful fire fighting demonstrations during Fire Prevention Week in October. Through the Headquarters Area Command of the U. S. Army, fire prevention exhibits, fire fighting drills and a colorful parade were conducted with German and American fire fighters. Shown above is a 4-section aerial ladder used in the demonstration by German fire fighters. Note reel of hose in the background. Fire fighters at right are demonstrating use of this reel in laying a supply line for the ladder pipe.

(Left) Aerial view of South Boston tenement fire showing distribution of apparatus in 5-alarm response. By this time control was established and salvage and mop-up operations were beginning. Note length and number of hose lines necessary to supply pumpers on the fireground. (Photo by Herbert Stier.)

FAST-SPREADING TENEMENT FIRE

Based on a report by Assistant Chief Patrick E. Collins, Boston, Massachusetts, Fire Department.

QUICK rescue work undoubtedly prevented a greater death toll when a mushrooming fire involved this 4-story and attic "third class" frame tenement building in South Boston, Massachusetts, on December 12. One child died in the building, but at least 18 other persons escaped or were rescued by fire fighters, police officers and civilians, as first responding companies laddered the front of the building promptly. Three fire fighters were injured and nine other persons were hospitalized during the early stages of the blaze.

The fire apparently started in the rear yard where rubbish was burning, then ignited the first floor porch. Off-duty Fire Fighter Anthony W. Kane, who lived in the neighborhood saw the blaze and telephoned the first alarm at 8:27 A.M. The first box alarm was struck at 8:28 A.M., followed by a second at 8:30. Responding to this alarm were Deputy Chief John F. Pettit and District Chief Edward J. Galvin, who ordered a third alarm at 8:34. Chief of Department John V. Stapleton requested a fourth two minutes later and 5-alarm response at 8:56 A.M., because the rapidly spreading fire was threatening to assume conflagration proportions in a district which has many of these wood frame tenement structures.

With low humidity, a temperature of about 24 degrees Fahrenheit, and a wind velocity of 25 miles an hour, conditions were "ideal" for a heavy involvement of the structure. As the photos on these pages show vertical openings in the interior permitted quick, intense fire progress to the upper stories while strong draft conditions caused the fire to mushroom rapidly through the rooms on each floor. By the time third alarm companies were getting into position, the siding in the rear of the building had been completely consumed by the fire permitting the wind to supply oxygen directly to the involved interior.

Apparatus was well-positioned for protection of exposures. Total response included 19 engine companies, 5 ladder companies, and 9 hose wagons equipped with

(Left) View of building front at height of fire showing the heavy smoke conditions which existed just after rescues had been accomplished. Several buildings on the opposite side of this street were ignited by flying brands but were under control quickly. (BFD Photo).

These two pictures show fire conditions in the rear of the building approximately 25 minutes after the first alarm was sounded. Engine 43, with deck gun in operation at extreme left, received blistered paint from exposure to the heat in this position. Asphalt-composition shingles of another tenement building (to the right of the lamp post at extreme right) were softened by the radiant heat, although the wind direction was away from this structure. Note intense steam forming on ground.

deck guns with adjustable nozzles. Three of these wagons were located directly to the rear of the involved structure, and the large calibre adjustable fog and straight streams were particularly effective in the protection of exposures. Twenty ground ladders were raised for rescue purposes. A total of 16,050 feet of hose was laid, including 1,750 feet of 3-inch supply line. Fire fighters also used twenty-two 2½-inch hand lines some of which were reduced to 1½-inch lines for interior fire fighting in the exposed dwellings.

Adjacent to the first involved structure was a three-story, wood frame, "third class" tenement building which became ignited from the close exposure. Fire fighters operated 1½-in. lines with combination straight stream and fog nozzles in moving through this dwelling and controlling the fire which eventually involved the upper story and some of the interior. Three other buildings in the immediate vicinity were involved because of flying sparks and burning embers. Initial estimates of fire damage were in the vicinity of $25,000.

As shown in the aerial photo on the opposite page considerable lengths of 2½- and 3-in. lines were stretched to supply the streams on the fireground. Water mains in the area were of 6-, 8-, 10- and 12-in. size, but some of the tips on the deck guns had to be reduced from 1⅝-in. size to 1½-in. to provide better reach for both fog and straight streams. Because of the location of hydrants in the vicinity long lines and corresponding high pressures were necessary. Several of these lines burst, temporarily limiting the effectiveness of two deck guns. Sufficient streams were in action on all sides of the building to provide effective containment of the fire. (For description of Boston's "single unit" operation which features a pre-connected deck gun and JN-200 nozzles, see the June, 1955, issue of FIREMEN. — Ed.)

The unusual sequence of photos on these pages were taken by Raymond T. Lonergan, Jr., Boston Fire Department photographer.

Difficult exposure conditions were handled competently in aggressive fire fighting action. The 3-story frame building at right was about 20 feet from the fully involved structure. Fog stream from deck gun (right center) and 2½-in. lines are shown here, but fire fighters also used 1½-in. lines inside the exposed dwelling during the early stages of the fire.

(Right) Fire conditions shortly before control was established, showing the fog stream from Engine 43's gun.

New large capacity pumper-hose laying lorry manufactured by Rolls-Royce for the Trinidad and Tobago Fire Brigade. Note ramp at the rear which lays out the special nylon and flax hose at high speeds with very little impact. The high roof deck has proven excellent for use of the turret nozzles. The relatively short wheel base makes the vehicle easy to maneuver.

TRINIDAD'S HOSE LAYING LORRIES

From a report by Chief Officer Ronald Cox, Trinidad and Tobago Fire Service, Port-of-Spain, Trinidad, BWI.

THE Trinidad and Tobago Fire Service has placed in service two unique hose laying lorries, designed by Chief Cox to supplement inadequate supplies from water mains. Present fresh water mains at Trinidad provide only about 700 gpm (Imperial) and salt water mains, about 1,500 gpm (Imperial). Many properties are located in suburbs isolated from existing water mains.

The two hose lorries which are unique in the British Empire operate to conduct water from the nearest salt water main, or from the ocean, through twin 3½-in. hose lines to the fireground. Each lorry accommodates 7,500 ft. of 3½-in. latex lined fire hose constructed of nylon and flax and equipped with British standard instantaneous couplings. The trucks are Diesel driven and have a built-in 1,400 gpm (Imperial) single stage centrifugal pump equivalent to 1,681 gpm (U.S.).

Hose is carried flaked in two compartments and the dual lines are best laid out at a speed of 40 miles per hour. The rear of the appliance has been designed to provide a special dropping board on ball bearing casters which is cushioned to take the drop of the couplings. This drops the hose very gently and Chief Cox reports, "it would just about break an egg and no more."

Another novel feature of the appliance is a provision of two reels of field telephone wire with 8,000 ft. of cable each, complete with two magneto-powered telephone sets. There is a special accommodation at the rear of the truck for a fireman to stand with a field telephone instructing the source pump, which operates in conjunction with the lorry. As the fire fighter sees the hose filling behind the vehicle, by using a buzzer, he instructs the driver to speed or slow the lorry.

In practice it has been found that 800 gpm (Imperial) or 960 gpm (U.S.) can be delivered over half a mile, or 400 gpm (Imperial) over one mile, without use of boosters.

When the layout is completed, the supply lines are connected to the large capacity pump on the lorry, and the water is utilized either to supply hand lines or the two 800 gpm deck guns or monitors provided on the reinforced roof deck.

After making the first run, if sufficient hose is available, the lorry makes a second run from the water supply. Before making the second run, it drops off one of the two 3,000-gallon circular, self-supporting, portable dams or suction reservoirs carried in the lorry's compartments.

The vehicle has a three-man cab and also a small cab for the officer in charge, which features a room for the maps, including plans of water supply distribution. Normally three men are required to operate the unit including the driver, the hose man at the rear, and the officer in charge. Above the cab is a 20,000-candle power searchlight (approximately 1,000 watts).

Opposite the officer's compartment is an equipment compartment All of the fire equipment of the hose layers are removable, and in half an hour the vehicles can be converted to water tank carriers by installation of a 2,000 gallon (Imperial) water tank. The tank is coupled to a special delivery connection in the pump.

The second hose lorry serves to back up the first unit, and for a cost of $88,000 (British West Indian currency) or approximately $59,000 U.S. money, Chief Cox reports that he has succeeded in doubling the water supply delivered to fires in his area. The units have already been used numerous times and water has been relayed as far as two miles in suburban areas. The apparatus was constructed by Rolls-Royce with fine hand-tooled body work. Chief Cox reports that the system has proven much faster in operation than the conventional portable emergency water pipe line. In practice a motorcycle and sidecar operate with the lorries and carry spare rolled hose. The fireman in the motorcycle straightens lines and provides ramps to protect the hose as needed.

Another advantage of the lorry system is that any standard size of fire hose can be used in conjunction with this apparatus, and the supply lines may be charged while the lines are being laid. In addition the equipment provides the fire brigade with two large capacity pumpers that can be used for general pumping service.

New station for Engine 4 ← replaces stations for Engine 4, Ladder 1 and Hose 8. →

Assistant Chiefs Henry L. Murphy and John L. Martin command Newton's new Engine 4 Station. It was built for slightly more than $224,000 and houses Engines 4 and 8 and the 85-ft. aerial of Ladder 1. It replaces two old stations — one which housed Hose 4, Ladder 1 and the fire department repair shop; and the old Hose 8 Station which is to be razed and replaced by a new library.

An Investment in *MODERNIZATION*

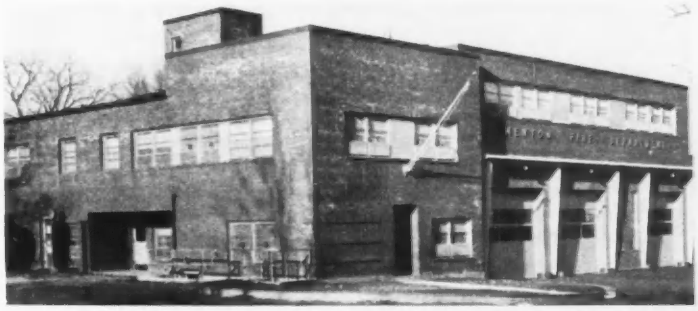
RECOGNIZING the need for properly located fire stations, the City of Newton, Massachusetts, several years ago authorized an $835,000 bond financed building program to give better facilities to Chief John E. Corcoran's Fire Department. As a result, three new stations, designed by Architect Gustav A. Hagen, were dedicated last October 25, bringing about an important consolidation of stations and apparatus.

As shown on this page the new buildings replace four old stations, one of which has existed since 1873. The others have been in operation since 1893 and 1895.

Each of the new stations features a hose drying tower and a room for drying fire fighters' clothing, as well as adequate "black topped" pavement for maneuvering of apparatus. Engine 7 Station also has a modern apparatus repair shop and a training center.

Chief Corcoran's Department includes 4 assistant chiefs, 9 captains, 30 lieutenants, 183 fire fighters and fire alarm operators, 2 motor equipment repairmen, a signal maintenance foreman, 3 signal maintainers and 3 clerical assistants. Department members work a 48-hour week.

(Photos by Lt. E. P. McClelland, Newton Fire Department.)



New station for Engine 3 replaces →

Assistant Chiefs Francis J. Linnehan and Frederick A. Perkins, Jr., command the new $272,900 Engine 3 Station which houses a 750 gpm pumper and a mobile lighting plant. It may also be quarters for a new 85 ft. aerial ladder which the Department plans to purchase. Rear section of the building contains the Fire Alarm and Wire Departments. This station replaces the building at right which housed Engine 3, Hose 3, the Chief's car, and the Fire Alarm and Battery Room.

(Below) New Engine 7, Ladder 2 Station cost $255,941 and also houses Ladder 4 and the Apparatus Repair Shop. The latter features a 10-ton hoist on an overhead track. This station also has a large, paved drill yard which will feature a drill tower, cisterns and pumping facilities at a future date. The old station is shown at right.

← New Engine 7 Ladder 2 station replaces →

The Cecil Royal Gehr FIRE COMBAT TRAINING CENTER

NOW in operation at the headquarters of the Los Angeles County Fire Department is the Cecil Royal Gehr Fire Combat Training Center. The new center was officially dedicated on November 14, 1955, and already hundreds of fire fighters have been trained at these facilities. (*See* FIREMEN *for May, 1955.*)

Shown above is a drill which was conducted during the dedication ceremonies, when, under the direction of Battalion Chief Kenneth W. Bicksler of Battalion 3, Engine Companies 3 and 32, Truck Company 27 and Rescue Company 39 demonstrated hose, ladder and rescue evolutions.

The new center will also serve to commemorate the memory of Cecil R. Gehr, former Chief of the Los Angeles County Fire Department, who was killed in an automobile accident while responding to a fire on July 14, 1953. Present Chief of Department Keith E. Klinger, during the dedication ceremonies, mentioned that the training facilities "were the dream of Chief Gehr, former Chief Spence D. Turner, and former Deputy Chief Joseph J. Davis."

In August, 1953, the Los Angeles County Board of Supervisors officially adopted a resolution which allowed completion of the school, and at the same time memorialized it in honor of Chief Gehr. Groundbreaking ceremonies were held in August, 1954, and the center was officially accepted by the Board of Supervisors and the Los Angeles County Fire Department in June, 1955.

There are more than four acres of paved area available for drilling, and the area is completely surrounded by a security fence. The training school includes a five-story drill tower and an administration building which features an auditorium with a capacity of 200 persons. Dormitory facilities are available for 15 men with additional space in the basement. Separate quarters are provided for the captains in charge of training, and the apparatus floor is capable of housing four engine companies or three engine companies and a truck company.

The five-story drill tower is 65 feet in height and has outside fire escapes, interior stairs, chambers for gas and smoke training, a sprinklered basement, various types of windows, and a complete public address system with both internal and external speakers. There is a 52,000 gpm underground sump for testing fire department pumpers.

Storage space is provided in the main school building, in addition to rooms for the Fire Prevention Bureau Laboratory, the fire alarm repair section, and the Weed Abatement Section's vehicles and equipment. For training purposes, a 1,000 gpm Seagrave International pumper is permanently quartered at the school. This unit has a 500 gallon booster tank and other equipment necessary for training new fire fighters.

Unveiling of training center plaque which commemorates Chief Gehr. (*Left to right*) Los Angeles County Supervisor John Anson Ford; Supervisor Burton W. Chace; Mrs. Cecil R. Gehr and County Fire Chief Keith E. Klinger.

What to do about

BASEMENT FIRES IN MERCANTILE OCCUPANCIES

From an address during the 1955 Virginia State Fire School by Clay A. Easterly, Fire Marshal, Martinsville, Virginia.

FIRE fighting is an emergency service, but through the years we have established general procedures for operation. These, of course, must be altered to meet unexpected developments on the fireground. Basement fires offer a particular challenge to the fire service, since thousands of basements have been constructed with little or no consideration for the problems of fire control, but there are certain procedures which fire departments can follow for preventing or controlling such fires.

The fact that a basement is of concrete construction does not lessen the burning qualities of its stored materials. The fact that some builder and property owner failed to provide ample access to a basement does not give a fire department an "alibi" for a loss, although in many cases lack of access is a principal weakness which contributes to a large loss fire.

In the average basement of mercantile occupancies there is a concentration of high value materials. The area by nature is for storage of stock and a small amount of smoke or water may cause large financial loss. We in the fire service may have been somewhat slow in encouraging and enforcing good fire prevention procedures for such locations. Since there is a diversity of risks in various basements our fire prevention approach must vary. However, there are many procedures which may be applied to all basements, and the following are suggested for consideration by fire department members:

1. Make thorough and frequent inspections.
2. Encourage orderly storage of stock.
3. Provide ample and well-planned aisles.
4. Require the best housekeeping possible.
5. Be exceptionally observant of drop lights and other lighting fixtures. Stock should be at least 18 inches from any electric light bulb.
6. Require daily removal of trash, waste and other materials which could result in spontaneous ignition.
7. Make special efforts to inspect any area which may be used for storage of janitor's supplies.
8. Rags or similar combustible material require the use of approved metal containers. All contaminated rags should be removed *daily*.
9. Limit smoking as much as possible. Watch for open flame devices.
10. Require adequate installation of fire extinguishers approved for the particular type of storage.

It is important for fire service officers to make a careful study of plans for any new buildings which are to be erected in their municipalities. If you can suggest improvement, present your recommendations to those who can correct an unsatisfactory condition. Most designers and architects are anxious to have your suggestions.

Your local building code should be specific and control the following important building factors:

1. *Fire-Resistive Materials.* Basement areas should be constructed of fire-resistive materials.
2. *Floor Construction.* This is perhaps the weakest factor in many building losses from fires which originated in the basement. Many fire fighters have battled a fire for hours in a basement, when suddenly the blaze has spread to the upper sections of the building because of inadequate floor resistance. A strong fire-resistive floor provides one method of keeping such a fire confined. Insist on the maximum fire-resistive rating where such appears to be practical. Don't compromise for a rating which you know will not be sufficient when fire occurs. (See NFPA Handbook of Fire Protection and Volume III, "Building Construction and Equipment," National Fire Codes — Ed.)
3. *Method of Storage.* It is vitally important that all fire inspectors give serious consideration to storage methods in basements which they inspect. Distribution of storage may influence the spread of fire, access to fire area, proper application of hose streams, salvage procedures, ventilation of the affected area, control of fire-spread to other parts of building and the *safety of firemen*.
4. *Sprinkler System.* A study of several thousand fires in sprinklered buildings indicated that in more than 97 percent of the cases the sprinkler systems were effective in controlling the fires, at least to the extent for which they were designed. In a majority of instances the sprinklers quickly and effectively extinguished the fires which occurred.

   Sprinklers are only mechanical devices, designed to perform a given function. If sprinkler heads are blocked or sufficient clearance is not maintained you cannot expect full efficiency of the system. There must be proper planning and maintenance to assure maximum protection from an installation.

   Many fires and thousands of dollars of fire loss may be averted through installation of properly designed sprinkler systems. In many instances insurance savings are sufficient to pay for the installation in ten years or less.

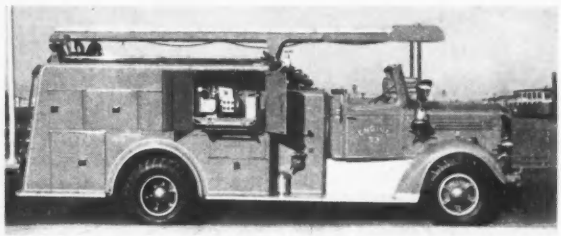
Fire Fighting Procedures. The writer has had accomplishments as well as failures in fighting basement fires. The following remarks are based on that experience and on a study of a number of typical situations.

Attack procedure may be listed under five topics. The listing, of course, does not mean the procedure would be followed in this order.

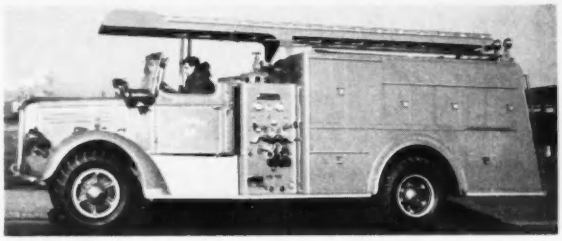
1. *Access to Basement*

   Most basements do not provide favorable means of access. In many instances little or no thought has been given to the need for fire fighters to make entry to control fire. We may assume that, in the average basement fire, little progress will be made

(*Continued on page 22*)



Right-hand side of Boston's new engine-squad truck showing open compartment with 3500 watt, Onan AC generator.



Note pump operator's panel on left side of engine-squad truck which also has ample compartments for equipment.

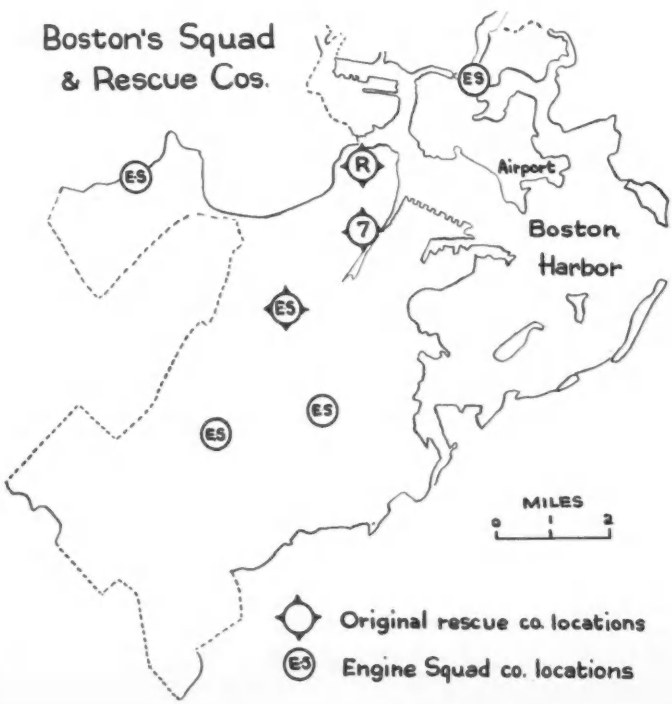
Rear view of apparatus showing compartments for two 1½-in. preconnected attack lines, compartment for 1,000 feet of 2½-in. hose, and compartment for 600 feet of 3-in. hose. Use of 3-in. Dacron-filler hose makes it possible to supply the pump with hydrant lines when the engine-squad truck is spotted near a fire.

Boston's Engine-Squad Companies

WARREN Y. KIMBALL, Manager
NFPA Fire Services Department

FIVE strategically located engine companies of the Boston Fire Department carry special emergency equipment and are designated "Engine-Squad Companies." The purpose of these new units is to make their special equipment immediately available in all parts of the city. The Engine-Squad Companies are now being equipped with special trucks designed by Captain Kenneth C. Arnold, the Department's Rescue Service instructor, under the direction of Assistant Chief Leo C. Driscoll. These trucks supplement the equipment of the Department's Central Rescue Company and emergency equipment such as inhalators and resuscitators carried by Boston's 30 ladder companies. In addition, one downtown engine company, having extra manpower assigned, operates a rescue truck as needed.

The new apparatus was constructed at a cost of $10,000 per vehicle by the Robinson Boiler Works of Cambridge, Massachusetts, on heavy-duty Mack truck chassis furnished by the Department. The Robinson Company specializes in the construction of emergency equipment, fire apparatus, and heavy duty tank trucks. The work was carried on under the watchful eye of Captain Arnold and other officers of the Fire Department. In addition to fifteen lighted equipment compartments along the two sides and the rear of each vehicle, the apparatus carries full engine company equipment, since the companies have regular box alarm assignments as engine companies, in addition to assigned districts for special calls.



Typical hose truck with chassis similar to those converted for engine-squad use.

Each truck has a 750 gpm, Class A Waterous, two-stage, centrifugal pump with two gated 2½-in. inlets. The booster tanks are well-baffled, flat bed type tanks carrying approximately 400 gallons of water. There are two pre-connected 1½-in. lines each equipped with an "S-O-S" adjustable fog nozzle. The divided hose body carries both 2½-in. and 3-in. hose with 2½-in. couplings. Each hose compartment has removable wooden top decks covered with tarps.

The overhead ladder rack carries a two-piece 35-foot aluminum extension ladder. While engine-squad companies would not normally perform ladder work, the ladders are provided for possible emergency use prior to the arrival of a truck company. The ladder rack is hinged so that it may be dropped down to speed removal of the ladder.

Emergency lighting equipment includes a new type 3,500 watt, Onan A.C. generator with a starting battery. The generator is arranged so that it can be operated either on the truck or as a portable unit.

Mounted over the top of the pump compartment is a three-way gated wagon gun which is also semi-portable. Departmental practice is to provide (attached to the gun) short lengths of 3-in. hose which will reach the pumper discharge ports. Three-inch hydrant supply lines are run to the pump on the truck when the pressure must be boosted to supply the guns. In normal operations using the two pre-connected 1½-in. attack lines and a 2½-in. backup line, a single 3-in. supply line is sufficient. (See FIREMEN magazine for June 1955, page 6.)

In designing the apparatus, special attention was given to "road ability," including proper weight distribution. New heavy-duty springs were provided, together with snow tires having "directional" treads to make steering easy.

The five Engine-Squad Companies, which were placed in service early in 1954, replaced two former rescue companies which had excessively large territories to serve, often resulting in long runs and occasionally delayed response. As shown on the map (*opposite page*), the present distribution of rescue service gives quick protection in all parts of the city of Boston.

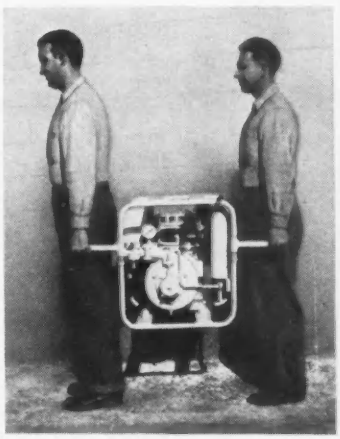
A hose truck chassis stripped down by the Fire Department Maintenance Division ready for delivery to apparatus builder. All serviceable items of equipment were saved for future use.

Boston Fire Department photos by D. E. Johnson

Hale Type FZZ

Fine for Relaying to Major Pumper . . .

• Compact • Sturdy • Versatile • Easily carried by 2 men



Above — Frame-mounted FZZ can be easily carried by two men. It is also available mounted on rubber cushioned steel channels, or on two truck-type wheels.

Fire Companies frequently write us telling of the many practical ways they use their portable Hale type FZZ, such as the following:

- For fighting field or forest fires from moving trucks.
- For "wetting down" and standby use, thus releasing major equipment.
- For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.
- For relaying water to pump or booster tank from sources inaccessible to major Fire Pumpers.
- For factory protection in fighting fires before major equipment arrives.
- For fighting oil or other type fires requiring foam. (Built-in foam proportioner available when specified.)

The FZZ will supply from draft two capable fire streams through 1½-in. lines. Performance substantially exceeds NBFU and NFPA capacity and pressure requirements.

Note: Discharge Adapter can be supplied for use with 2½-in fire hose.

Write for FZZ folder today.

Ask for demonstration without obligation.

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EXCLUSIVE FEATURES

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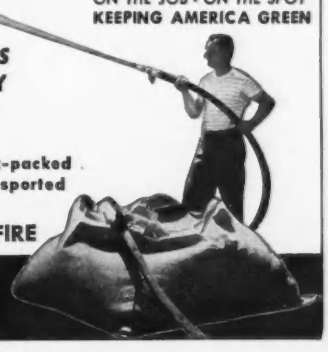
Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE



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"BOOSTER HOSE COMPANY No. 5½"

By Captain William Paul Babcock

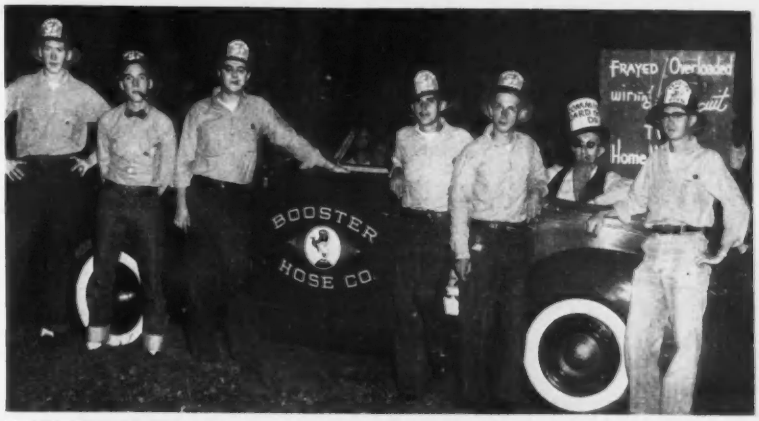
MANY volunteer fire companies use "comedy squads" to present effective fire prevention messages to the public. One of these organizations is active in Nyack, New York.

Named "Booster Hose Company No. 5½," this group was organized October 21, 1954, by fire fighters of one company in the Nyack Fire Department. As it gained in popularity, members of the other six companies in the Department joined the original group. Since "No. 5½" is not a fire fighting unit "dual membership" does not violate any regulation of the Department.

Purpose of the unique company is to teach fire prevention, chiefly by means of comedy skits during parades and other public gatherings. "No. 5½" has membership in the National Fire Protection Association and uses the Association's posters and other materials to illustrate fire safety lessons. The volunteer group aided the Nyack Community Fire Prevention Committee during the past Fire Prevention Week. (*The Committee has been promoting fire prevention for the past 24 years but this activity was recently assumed by the Nyack Fire Department. Its first chairman was Charles*

"Dog house" trailer used to stress the need for "approved" gasoline containers.

(Right) Members of "Booster Hose Company No. 5½" pose with one of their vehicles.



R. Ackerman, then Chief of the Department, who headed the committee until the middle 1940's. — Ed.)

During the past year the Village's Fire Prevention Department conducted a special campaign to discourage the vending of gasoline in glass jugs. In supporting this campaign during public gatherings members of "No. 5½" used a special "dog house" trailer to stress the need for using "approved" gasoline containers. (See picture.) The group is also available to assist in parades and similar ceremonies in other communities and is open to suggestions from other fire department organizations concerning better presentation of other fire prevention lessons.

Funds for the "Booster" unit are raised through merchandising of fire equipment and other materials which will improve protection against fire. (*Photos by L. F. Stockmeyer.*)

ADT Appointment

AMERICAN District Telegraph Company, New York City, New York has announced that Laurence J. O'Brien assumed the position of General Sales Manager on January 1. He is the son of the late John P. O'Brien, former mayor of New York City, and is a graduate of Georgetown University and Fordham Law School. Prior to his association with ADT he was a member of International Business Machines' sales organization.

Volunteers' Pumper

Members of the Union Bay, British Columbia, Volunteer Fire Department, worked for about fifteen months to build this pumper. It has a 500 gpm American-Marsh front mount pump and a 575-gallon heated tank. It carries 300 ft. of ¾-in. booster hose on the reel, 250-ft. of 1½-in. line on each side of the body and 400 ft. of 2½-in. hose in the center hose bed. There is also a 35-ft., 3-section extension ladder and other fire fighting tools and equipment.

Announcing
new one inch size
Vaseline
Sterile Petrolatum Gauze
especially adapted to
a wide range of uses.
new
1" x 36" strips, in individual sterile-sealed foil-envelopes. 6 envelopes in carton.
other sizes:
3" x 18" strips, 12 to carton
3" x 36" strips, 6 to carton
6" x 36" strips, 6 to carton
If it's "Vaseline" Petrolatum Gauze it's sterile at the time of use.
CHESEBROUGH MFG. CO. CONS'D
Professional Products Division
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VASELINE is the registered trade-mark of the Chesebrough Mfg. Co., Cons'd.
By request...
Developed to meet the widespread demand for a narrow dressing for small area burns and abrasions, for finger and hand injuries, for numerous other first-aid applications.
Vaseline
Petrolatum Gauze Dressing and Packing Material
Sterile
SEE INSTRUCTIONS ON REVERSE SIDE

Basement Fires in Mercantile Occupancies

(*Continued from page 12*)

from outside, particularly during the early stages of fire. Therefore, access must be made from other sections of the building, either from the floor above, or the side walls. Much fire fighting must be done through a limited number of openings. Basement fires may feature incomplete combustion and perhaps low oxygen content, which means that firemen entering such areas should always be protected with self-contained breathing equipment. Don't go in unprotected to see if such equipment is needed . . . you may not come back.

2. *Water on Fire*

There are several theories concerning the correct procedure of attacking a basement fire. However, in general, there appears to be eight factors in which improvements can be effected:

(1) Too much water is used.
(2) Streams are thrown into "unknown" areas.
(3) Attack on the fire is made before a reasonable size-up of conditions is completed.
(4) Too much dependence is placed on the possibility of flooding the area.
(5) Firemen are often sent into areas without having proper knowledge of construction features.
(6) Firemen are allowed to enter without proper breathing equipment.
(7) Many times there is a delay in planning proper procedures for protection of other parts of building, particularly the floors above.
(8) Making improper openings.

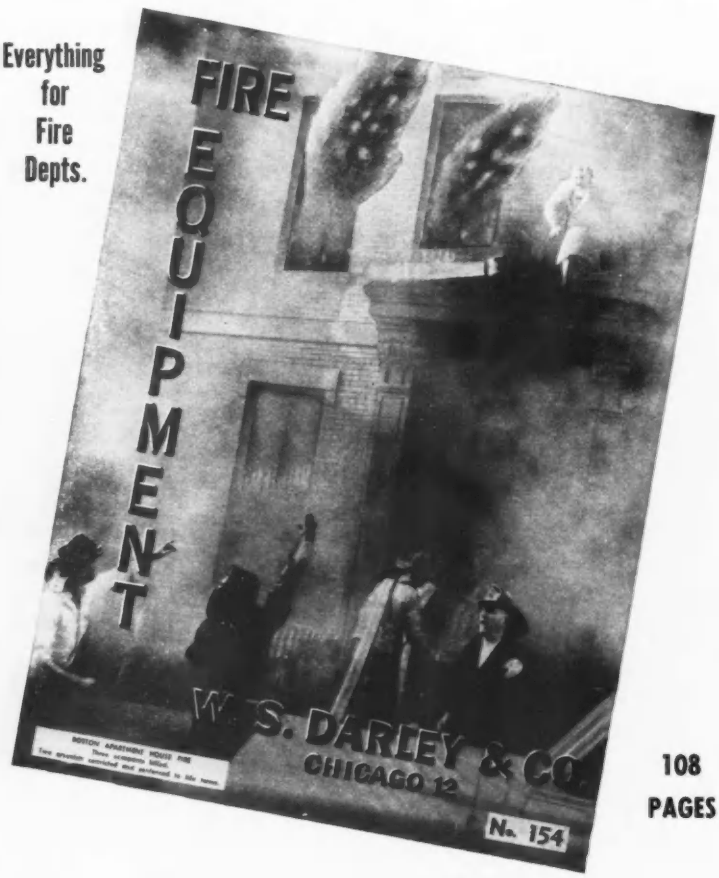
Many pages could very well be devoted to discussion of correct combat procedures, but the following brief suggestions are offered:

1. Endeavor to make all streams as effective as possible.
2. Use fog streams for cooling purposes.
3. Make every effort possible to cut openings in areas of most advantage and don't forget to protect such openings.
4. Be deliberate in "size-up."
5. Provide for protection of areas where vertical spread of fire is possible.
6. Provide maximum protection and supervision for men assigned.
7. Consult men who are familiar with the building conditions.
8. Determine, if possible, the type of materials and stock in the area.
9. Use cellar nozzles to greatest possible advantage.
10. Be on the alert constantly for possible building collapse.
11. Watch for unprotected steel.
12. Watch for "back draft" conditions.

It is reasonable to assume that there is general agreement on the major characteristics of the basement fire problem. Also, there is considerable evidence that we have not yet "mastered" such fires, although the fire service has made outstanding progress in many other phases of fire control. There is no reason to believe we will not make progress in this particular phase, but much remains to be accomplished. Any ideas or suggestions which you can offer for improvement will be a worth-while contribution to the fire service.

Write Today For This NEW Catalog

Everything for Fire Depts.



108 PAGES

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ESTABLISHED 1908 CHICAGO 12, ILLINOIS

Resolution on Salaries

DURING the 1955 annual meeting of the Ontario Association of Fire Chiefs in Toronto, Ontario, November 17, the association unanimously passed a resolution concerning salaries for fire officers. It was resolved that the members of the association take action to make their municipal councils approve the following salary differential:

For a Lieutenant or Junior Captain, an increase of 15% over the salary paid to a first-class fire fighter to give him a salary scale compared to a fire fighter of 115%.

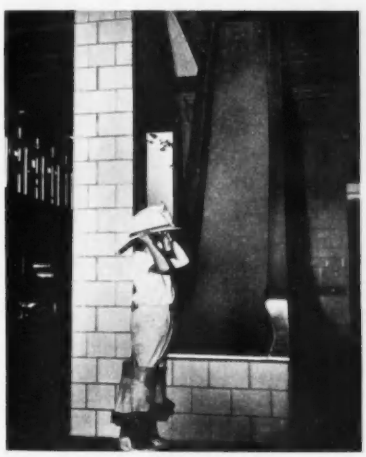
For a Captain, a further increase of 15% to give him a salary scale of 130% of the salary paid to a first-class fire fighter.

For a District Chief, who has substantially greater responsibilities, an increase of a further 30% to give him a salary rate of 160% of that paid to a first-class fire fighter.

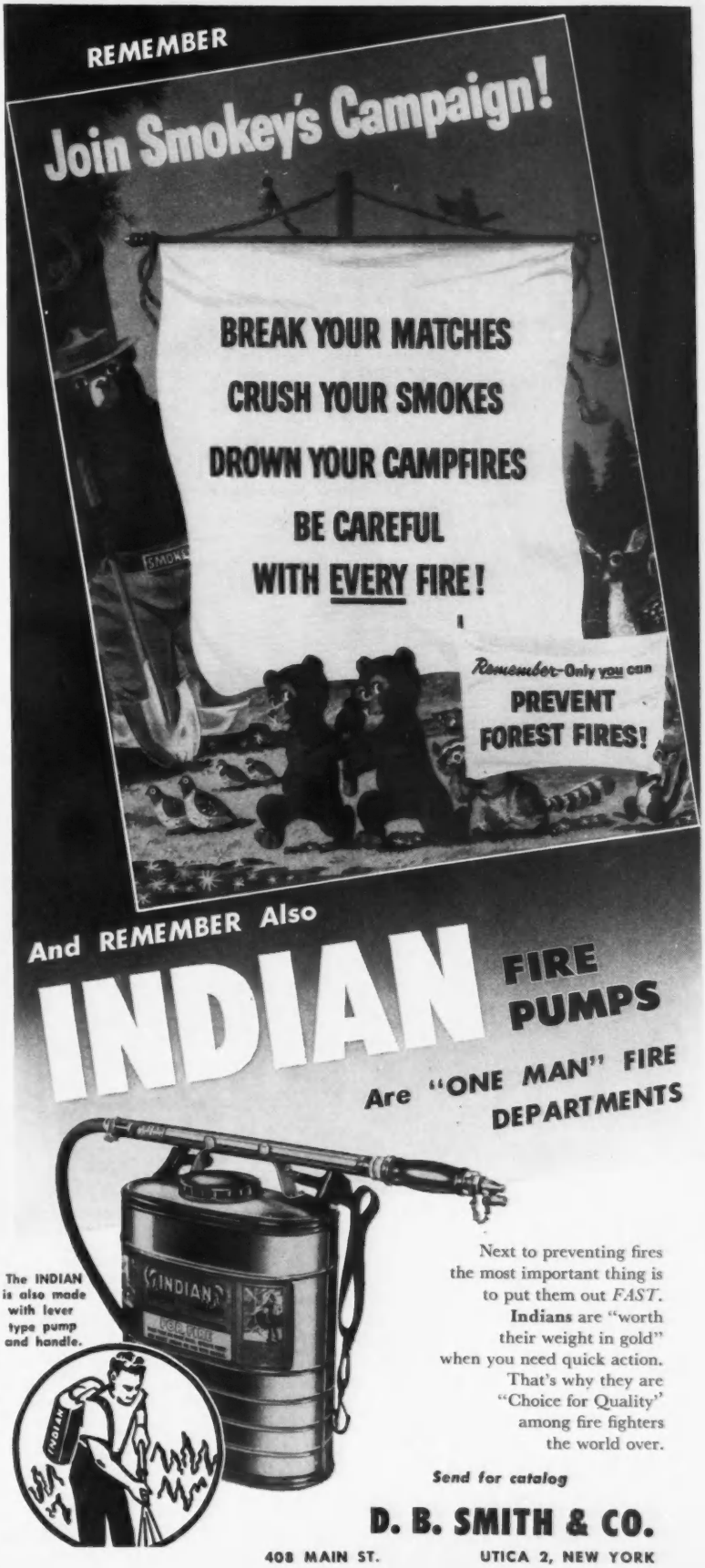
For a Platoon Chief or Assistant Deputy Chief, a further 15% to give him a salary scale of 175%.

For a Deputy Chief a salary scale of 190%.

For a Chief, having in mind the responsibilities he solely must bear, an increase of at least 30% more than the salary paid the Deputy Chief, to give him a salary scale of not less than 220% of the salary paid to a first-class fire fighter in his municipality, with a further 5% increase for each 50,000 population.



Fire Fighters Slide in Birmingham One of the fire stations in Birmingham, Michigan, is equipped with this stainless steel slide connecting the second floor dormitory with the apparatus room. Made by Alleghany Ludlum Steel Corporation, the slide is about 20 feet long and about 12 feet high. The bottom end is about 18 inches above floor level, while the top features a tile retaining wall on three sides. The slide also has a double dip and 8-inch high birch bars to control speed of descent.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Join Smokey's Campaign!
BREAK YOUR MATCHES
CRUSH YOUR SMOKES
DROWN YOUR CAMPFIRES
BE CAREFUL
WITH EVERY FIRE!
Remember-Only you can
PREVENT
FOREST FIRES!
And REMEMBER Also
INDIAN FIRE PUMPS
Are "ONE MAN" FIRE DEPARTMENTS
The INDIAN is also made with lever type pump and handle.
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Next to preventing fires the most important thing is to put them out FAST. Indians are "worth their weight in gold" when you need quick action. That's why they are "Choice for Quality" among fire fighters the world over.
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SUPERIORITY

Imitation is the most certain proof of superiority! The time and energy others put into imitating FEDERAL, FEDERAL puts into product research and improvement.

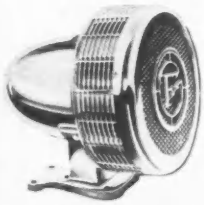
FEDERAL is the leader!

For proof, notice the overwhelming percentage of FEDERAL Beacon Ray lights and FEDERAL Coaster Sirens used as standard equipment on the superior fire apparatus in the pictures in the magazines.

This doesn't just "happen" — an overwhelming preference doesn't develop overnight — it builds gradually from years of high quality production backed by years of dependable, co-operative service.

If you are in doubt, do as many others do, these who know — Specify FEDERAL!

FEDERAL manufactures a complete line of emergency vehicle warning signals.



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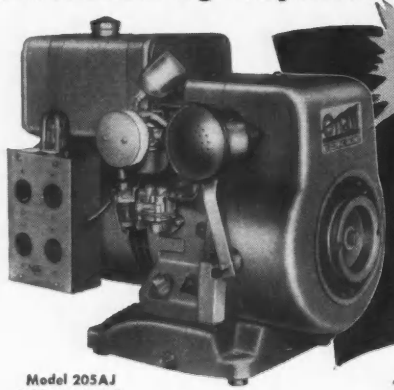
More Power, Lighter Weight, More Compact

Powered by dependable 4-cycle engines



New ONAN Portable ELECTRIC PLANTS

Model 205AJ
2,500 watts A.C.

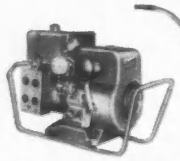
Put more power on the job!

These new power-packed electric plants are smaller . . . lighter . . . easier to take along and move around. Model 205AJ shown here weighs only 154 pounds . . . *yet it develops 2,500 watts A.C.*

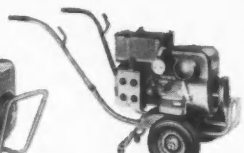
Multiple receptacles allow direct plug-in of several floodlights or heavy-duty electric tools, supplying a whole crew with labor-saving electric power.

These new plants are completely Onan-built with Onan engines direct-connected to Onan generators for trouble-free long life. Carrying frames and two-wheel dollies are optional equipment.

Onan Portable Electric Plants: 500 to 5,000 watts.



CARRYING FRAME for hand lifting and moving.



TWO-WHEEL DOLLY for easy moving by one man.

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Onan ELECTRIC PLANTS

D. W. ONAN & SONS INC.

3040 University Avenue S. E., Minneapolis 14, Minnesota

to Start!

"Hap" Grunwell Honored

BATTALION Chief Alfred M. "Hap" Grunwell of the Washington, D.C., Fire Department was honored recently by the Junior Chamber of Commerce of that city. During a special luncheon, he received a plaque "in recognition of his outstanding contribution to the field of fire protection in 1955." Chief Grunwell is a member of the NFPA Committee on Firemen's Training and a member of the Technical Committee of the NFPA Committee on Aviation and Airport Fire Protection. For many years he has made significant contributions to other NFPA activities and has been author of a number of articles in FIREMEN magazine. He is shown above (right) with Commissioner Samuel Spencer of the District of Columbia.

Fire Protection Year Book

THE 1956 edition of the Fire Protection Year Book has been published by Fire Protection Review, Bouverie House, 154 Fleet Street, London, EC4, England. This 16th edition has eight sections dealing with various phases of fire fighting or fire protection.

Section I contains a directory of all public Fire Brigades and Salvage Corps in the British Islands.

Section II is a directory of industrial and private Fire Brigades.

Section III describes the Fire Services of the British Commonwealth and Empire.

Section IV has been enlarged to give details of civil defense organizations and their officers.

Section V deals with Government departments and public authorities concerned with fire prevention.

Section VI contains particulars of associations, institutions and societies interested in or actually connected with fire fighting and fire prevention.

Sections VII and VIII respectively deal with legal aspects of fire safety and fire engineering technicalities and essential statistics.

Also included in the book is a comprehensive list of suppliers of fire safety equipment, together with trade names and a useful desk diary.

The year book may be purchased from the publishers at the above address for 12 shillings, 6 pennies, postpaid or $1.75 in U. S. money. It also may be obtained together with twelve monthly issues of *Fire Protection Review* for one pound per year ($2.82 in U. S. money).

New Chief Appointed

FORMER Assistant Chief Howard Attwood (right) is now Chief of the Butler Township Fire Department in Vandalia, Ohio. He succeeds former Chief Claude Senseman (left) who has now retired and has been given the title of "Chief Emeritus" of the department. Chief Attwood joined the department in 1946 and was named Assistant Chief in 1951. He was placed in charge of training and inspection work in 1953. Chief Senseman served 19 years with the department, the last 8 years as Chief.

Both Chiefs are members of the Central Western Ohio Fire Association and have held offices in the Montgomery County Fire Fighters Association. Both received extensive training through the program conducted by Ohio State University.

Picture Window Vision for Greater Safety!

SCOTTORAMIC FACE MASK

Like looking through a picture window, the SCOTTORAMIC Face Mask with its full wrap around safety plastic lens gives unobstructed vision so important to safety in firefighting.

Special double lip face seal assures greater comfort and protection. Non-fogging is assured by the circular air-washing action of the cool air. Gives air conditioned comfort. Eliminates that "closed-in" feeling caused by tunnel vision of old style masks. May be worn over some types of glasses.

Bring your self-contained breathing equipment up to date with SCOTTORAMIC Face Masks. See your nearest Scott Dealer . . . or write us direct for complete information.

SINCE 1932 Scott FOR SAFETY - FOR SERVICE

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236 ERIE STREET LANCASTER, N. Y.

Canada: Safety Supply Co., Toronto — Branches in principal cities

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LEADER LINE SIAMESE
Two-Way-Quarter Turn
Male outlets — ¾", 1", 1¼", 1½" or 2".
Female Swivel inlet 1½", 2" or 2½".
Pin Lug or sensible lug swivel.
Rough body, painted red with polished bronze or chromium plated trim.

If You Do Not Have One,
Send For Our New Catalog "A" Today.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
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Established 1892

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Safety Clothing for FIREMEN
The Original STRIPED SAFETY COAT

The striped safety coat for firemen is an *original* MIDWESTERN development . . . featuring highly visible yellow stripes which are *rubberized as part of the material* . . . not painted, glued or sewed on!

Service records prove that Midwestern Striped Safety Coats withstand years of rugged duty . . . offer high safety visibility during the entire life of the garment. There are many imitations but *no substitute* for the workmanship, built-in comfort and longer wear you receive by specifying MIDWESTERN.

MIDWESTERN LEADS IN QUALITY

Superior quality, advanced design, exclusive fabric materials and safety features have made Midwestern a leader in the field of firemen's safety clothing. For complete information on our full line, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Safety Coats**

Fire Protection Course

COLUMBIA UNIVERSITY, Department of Industrial and Management Engineering and the School of General Studies, Morningside Heights, New York 27, offers the following course for the spring session beginning in Feb., two hours one evening a week for 16 weeks.

G. S. Industrial Engineering 282 — Fire protection engineering. The course is given by Julius Hannoch, (associate member, Society of Fire Protection Engineers), who is in charge of safety and fire protection at the Brookhaven National Laboratory operated by the Associated Universities, Inc. at Upton, New York. The course may be taken with credit toward a degree but a student must be regularly registered at the university for degree credit.

Spring Clean-Up Slogan

"LOOK Safe, Feel Safe, Be Safe from Fire — Clean Up" is the national slogan for Spring Clean-Up Week in 1956. The resemblance to a popular advertising slogan is possible because of cooperation of the Gillette Safety Razor Company, which agreed to the Association's use of an adaptation of its slogan.

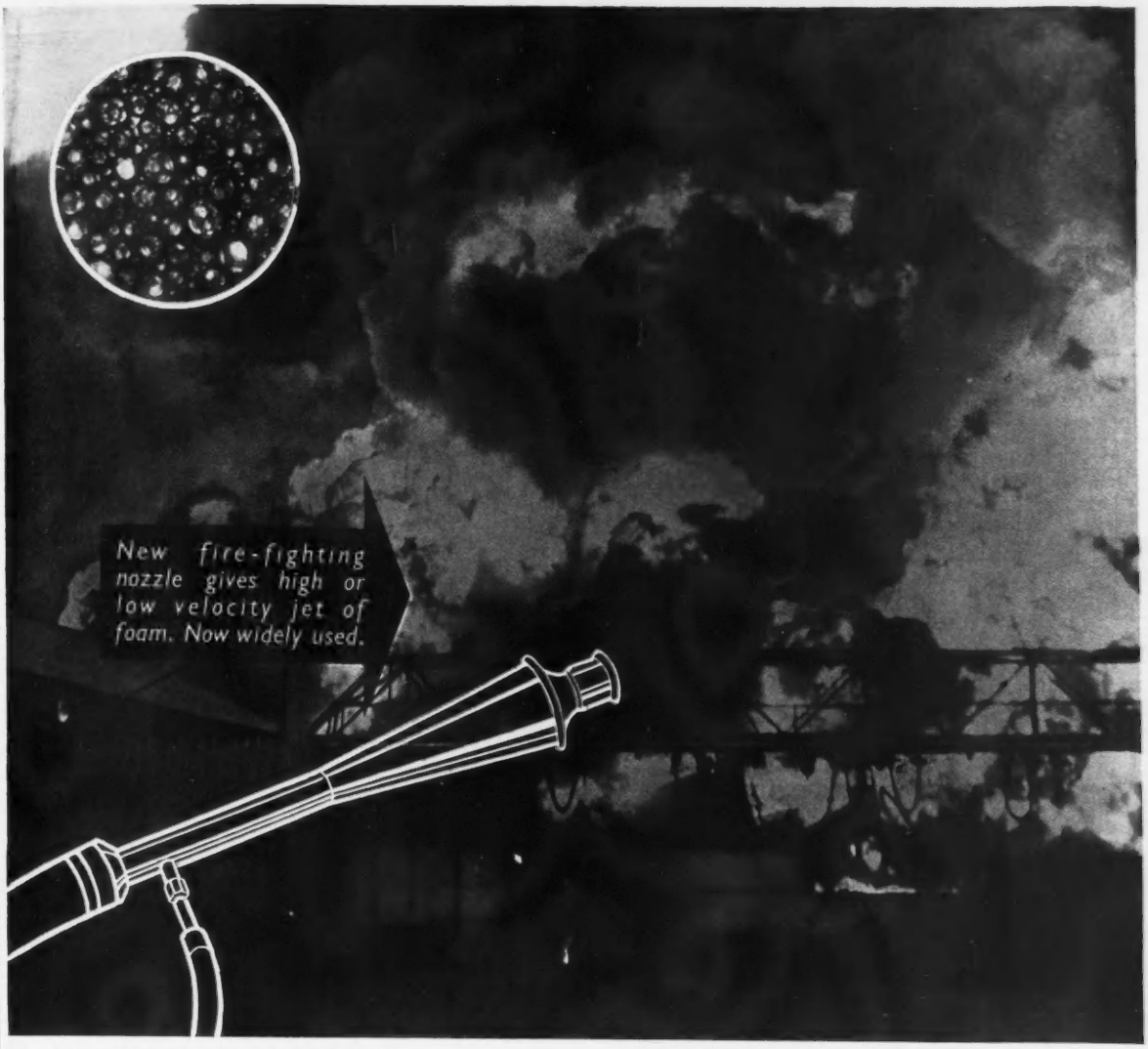
Thousands of North American communities will observe this special week beginning as early as next March in the deep South and as late as June in the far North. There is no special date anywhere in North America for Spring Clean-Up Campaigns other than the advent of Spring in various regions.

Samples of NFPA campaign materials for Spring Clean-Up will be forwarded to member fire departments with the next issue of NFPA *Fire News*. As in the past, the observance will be sponsored by the NFPA in cooperation with the U.S. Dept. of Agriculture and the International Association of Fire Chiefs.

FOR SALE

1937 Autocar Quad, with 600 gpm two-stage centrifugal pump; 100 gal. booster tank; 150 feet of 1" booster hose; hose body capacity — 1,200 feet of 2½" hose; 215 feet of wood ladders and miscellaneous equipment.

For information write:
Radnor Fire Company of Wayne
P. O. Box 349, Wayne, Pa.



Photomicrograph Mag. X30 shows close-knit bubble blanket of foam.

The type of dangerous oil fire that is

KILLED QUICKLY BY

Nicerol, with pH 6.8 to 7.3, does not corrode drums or valuable equipment. It does not form sludge. 3 gallons of Nicerol NLXX (3%) Foam Liquid with 100 gallons of water, fresh or salt, forms 1,000 gallons of close-knit foam (see photomicrograph above). A Nicerol test can cost you nothing this way:— Write the one word SAMPLE on your official stationery and we will send you, freight pre-paid anywhere in the U.S.A. or Canada, a 5-gallon can of Nicerol NLXX (3%) for $20 C.O.D. (or enclose draft). The $20 cost of this sample will be deducted from your first 100 gallon or larger order for Nicerol.

Nicerol

foam—
AND IT STAYS DEAD

A dense blanket of adhesive, cohesive foam which actually follows the fire—stifles it, outlasts it and prevents flashback — that's Nicerol, most widely used foam compound in the world.

Full technical and commercial details available from:—

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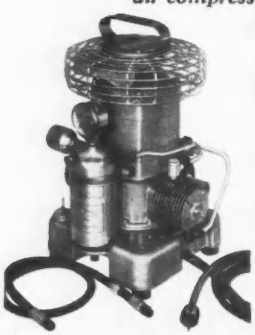
THE GENERAL DETROIT CORP., P.O. BOX 263, DETROIT 32, MICHIGAN.
THE GENERAL PACIFIC CORP., 8740 WEST WASHINGTON BLVD., CULVER CITY, CAL.

...in heaviest smoke and toxic gases...

BREATHE FRESH, PURE AIR!

Be sure the men in your department have the protection, comfort and confidence provided by an abundant source of pure, fresh air supplied by a *Cornelius portable air compressor.*



NEW Cornelius AIR COMPRESSOR

NEW lighter weight—only 38 lbs.
NEW smaller size—only 17 in. high
NEW lower cost
NEW higher air capacity
NEW air freshness with high pressure air purifier

Call your distributor or write for free catalog.

THE CORNELIUS COMPANY
550 - 39th Avenue N. E.
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Model 130R1500 (3000 PSI)

Better Hose Care - with CIRCUL-AIR
HOSE CONDITIONING EQUIPMENT
WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS

FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates pre-warmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life! No other drying method is so fast — so economical — so easy to use.

LABORATORIES APPROVED

USED IN OVER 3,000 LEADING FIRE DEPARTMENTS

Rota-Jet
FIRE HOSE WASHER

Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one-man operation. With or without detergents ashes, dirt, mud and sludge are automatically scrubbed out and flushed away.

WRITE FOR NEW FOLDER
If you are planning to build or remodel, send for our brochure "Fire Station Design."

THE CIRCUL-AIR CORPORATION
575 EAST MILWAUKEE
DETROIT 2, MICHIGAN

Contest Judging Completed

SHOWN above are the judges of the 1955 Fire Prevention Week Contest who completed the examination of the 1,510 entries during the week of December 18. Winners of the Contest will be announced nationally this month and a description of the top entries will appear in the February issue of FIREMEN.

In the front row (left to right) are: Chief John V. Stapleton, Boston, Massachusetts, Fire Department, representing the International Association of Fire Chiefs; A. Leslie Ham, Manager, Dominion Board of Insurance Underwriters (Montreal); C. M. Gallagher, United States Manager, Atlas Assurance Company, representing the National Board of Fire Underwriters; and NFPA President T. Seddon Duke, President, Star Sprinkler Corporation, Philadelphia, Pennsylvania.

In the rear are NFPA General Manager Percy Bugbee and Dale K. Auck, Federation of Mutual Fire Insurance Companies, Chicago, Illinois.

From Fire Fighter John W. Price of the Lancaster, Pennsylvania, Fire Department, comes word of the passing of Reverend Wilson Davis, of Ridgely, Maryland. Reverend Davis was well-known to fire fighters and fire service associations in several Eastern States. In addition to being pastor of two Methodist charges, he served as a lieutenant in the Ridgely Fire Department and was an enthusiastic exponent of fire prevention. He prepared many unusual displays for Fire Prevention Week in his community and gave particular attention to presenting such information to children. He also authored articles on fire prevention for religious publications, and retained a personal membership in NFPA.

Which Way Is Out?

This colorful 8½- by 11-in. poster has just been published by NFPA. Single copies will be sent to all NFPA members. Quantity prices are: $1.00 per dozen, $5.00 per hundred, and $35 per thousand. Order from NFPA Publications Department, 60 Batterymarch Street, Boston 10, Massachusetts.

New Members in NFPA

THE fire chiefs and fire departments listed below recently joined the NFPA under the Fire Department Membership plan. Currently 2,198 fire departments and 25,765 fire fighters in paid, call and volunteer departments participate in this plan.

Illinois: Monmouth Fire Department and Monmouth Booster Company, Monmouth.

Kentucky: Florence Volunteer Fire Department, Florence.

Louisiana: Fire Protection District No. 1 of St. Landry Parish, Krotz Springs.

Michigan: Gibraltar Fire Department, Gibraltar.

Missouri: Billings Farmers Fire Protection Association, Inc., Billings; Maryville Volunteer Fire Department, Maryville.

New Mexico: Chief M. L. Hassell, Bluewater Fire Department, Bluewater.

North Carolina: Weldon Fire Department, Weldon.

Nova Scotia: Liverpool Fire Department, Liverpool.

Oklahoma: Chandler Fire Department, Chandler.

Pennsylvania: Mansfield Hose Company, Mansfield; Pioneer Hose Company No. 1, Robesonia.

Texas: Chief Earl R. Rutherford, Groves Fire Department, Groves; Griffing Park Volunteer Fire Department, Port Arthur.

Wisconsin: Lyons Twp. Volunteer Fire Department, Lyons.

Specify HALE

- Completely Modern
- Reliable
- Rugged
- Compact
- Conservatively Rated
- Sold thru Mfrs. of Quality Apparatus

VALUABLE TIME SAVED: While we have always emphasized *Reliability* of priming rather than *Speed* of priming, we cannot help taking pride in the results obtained in the test shown in this picture. PRIMING TIME (Water out the Nozzle) WAS BETTER THAN 18 SECONDS FOR THIS HALE QL PUMP ON A 22-FOOT LIFT! This was done at reasonable Engine speed in both series and parallel.

Minimum specifications require priming on a 10-foot lift in 30 seconds. A substantial reserve on all HALE products is a consistent HALE policy.

Send today for QL Bulletin 334. HALE pumps are built in all standard capacities.

HALE FIRE PUMP CO. Conshohocken, Pa.

The Multi-Purpose "HALLIGAN TOOL"

1 Piece of No. 4140 Steel

FOR . . . FORCIBLE ENTRY — OVERHAULING — DEMOLITION — CRASHES — WRECKS — HEAVY LIFTING, ETC.

And Now . . . .
The 'New Look' "HALLIGAN HOOK"

Triple Insulation — Available in 3′, 6′ and 10′ Sizes

This is "NOT" a Boat Hook. It took six years to develop at fires and on buildings ready for demolition.

M. A. HALLIGAN 1505 METROPOLITAN AVE. NEW YORK 62, N. Y.

"I recommend BI-KLEEN for the FIRE HOUSE as well as FIRE HOSE!"

For cleaner, longer-lasting fire hose

This statement was made recently by a prominent fire chief because *Bi-Kleen* is not only the ideal cleaning and protection agent for all cotton rubber-lined hose, but it also does an amazingly fast and efficient job of cleaning oil, dirt and grease from the floor — even rough cement floors. Fire hose racks and truck beds need a good cleaning compound, too — and *Bi-Kleen* does a perfect job — keeps equipment "inspection clean" *all* the time with less scrubbing!

Order the inexpensive trial size today! You'll discover safe, non-toxic *Bi-Kleen* will save hose, save work, save money. Sold by the makers of the finest fire hose in the world — Bi-Lateral, flat-folding, non-creasing fire hose.

Bi-Lateral®

FIRE HOSE COMPANY
20 No. Wacker Drive
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HOME-LITE
Portable Blower

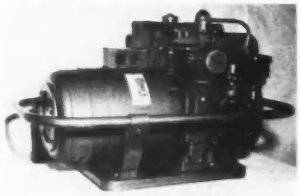
Ideal for firemen. Can be used to blow odors, smoke and gases out, or to blow fresh air in. Portable, gasoline engine driven model G. 2,000 CFM. 9 inch inlet, 11½ outlet. Flexible exhaust, pressure type. Government Surplus. NEW, in original crates. Shipping weight 145 lbs. Net weight 80 lbs.

SATISFACTION GUARANTEED **$69.50**

NOTICE: If your check accompanies our order we'll prepay the freight.

GORDON & POPE SUPPLY CO.
2468 E. Lancaster Fort Worth, Texas
Phone LOckwood 8310

New Items of Fire Equipment



Portable Power Plants

Four new models of lightweight portable A.C. power plants are being produced by the Katolight Corporation, Box 891, Mankato, Minnesota. They are available in capacities of 1,000, 1,500, 2,500 and 3,500 watts with individual weights ranging from 90 pounds to 280 pounds. The portable plants feature 4-cycle Briggs and Stratton engines and are designed for operation of power tools and other emergency equipment. A free descriptive folder is available from the manufacturer at the above address.

New Booklet on "Airfoam"

American LaFrance Corporation of Elmira, New York, recently produced this new booklet on "Foamite Airfoam" fire extinguishing systems. It includes engineering data pertaining to the use of this agent in trucks and other portable equipment. Free copies may be obtained by writing to the manufacturer.

Self-Sticker

Individual self-sticking numbers and letters in six sizes from ½ inch to five inches high are made by W. H. Brady Company, 727 W. Glendale Avenue, Milwaukee 12, Wisconsin. The numbers and letters are available in black on white or black on yellow, and are made of impregnated cotton cloth which has temperature-resistant, pressure-sensitive adhesive. When requested, the manufacturer supplies the numbers and letters on handy dispenser cards which protect the adhesive until it is used. They were developed particularly for marking fire extinguishers and other safety equipment. A new six-page Bulletin No. 165 and free samples are available from the manufacturer at the above address.

Engine Hour Meter

Master mechanics of fire departments may be interested in the new "direct reading" engine hour meter manufactured by John W. Hobbs Corporation, Springfield, Illinois. The meters are read in the same way as the odometer of an automobile speedometer. Black figures show the total number of hours the engine has been operating while a red figure at the right indicates tenths of an hour (six minutes). A rotating disc in the upper left segment of the face shows when the meter is operating. The engine hour meter registers up to 10,000 hours then returns to zero. It is available in 6-volt, 12-volt, 24-volt and higher voltage models. Full descriptions are given in the Hobbs Catalog DC-580 which may be obtained free from the manufacturer.

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Electric Hack Saw

This portable electric hack saw is designed for making straight, circular or random cuts in wood, stainless steel, tempered aluminum and mild steel. According to the manufacturer, it operates on alternating or direct current and cuts into most construction materials as well as 20 gauge or lighter sheet metals. Measuring 15½ inches long and weighing only 6¾ pounds, the unit called "Key-Hak" features a pistol-grip handle and has complete control of operation in any direction. A variety of blade sizes and types may be obtained with the saw. Write to the manufacturer, Producers and Distributors, Inc., 1321 Hanover Avenue, Allentown, Pennsylvania, for further information.

New Ball Valve

Rockwood Sprinkler Company, 38 Harlow Street, Worcester 5, Massachusetts, is now distributing a new "top entry full round flow ball valve" in ½, ¾ and 1-inch sizes. The new assembly permits changing the direction of shut-off, changing of valve seat material, and cleaning of the valve without removing it from the line. Valve seats are available in neoprene, nylon, and other synthetic materials. Write to the manufacturer for further information.

New Face Mask

Scott Aviation Corporation, 236P Erie Street, Lancaster, New York, now produces a new type of face mask called the "Scottoramic." Designed for use in fire fighting, the new mask features a plastic safety lens, increased lens area for vision, and a double lip seal which permits the mask to be worn over glasses. Microphone and air hose are optional equipment. Further information may be obtained from the manufacturer at the above address.

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